

Safety Data Sheet NICKEL FLUOBORATE

SECTION 1 : CHEMICAL PRODUCT AND COMPANY IDENTIFICATION		
Product Name	: Nickel Fluoborate	
Synonym	: Nickel (II) Tetrafluoroborate Borate(1-),tetrafluoro-,Nickel(ii)fluoborate , Nickel borofluoride, Nickel fluoroborate, Nickel oustetrafluoroborate, Nickel tetrafluoroborate(solution40%), Nickelous Fluoborate, Nickel(II) tetrafluoroborate, Nickel bis(tetrafluoroborate)	
Chemical Formula	: Ni(BF ₄) ₂	
Molecular Formula	: B ₂ F ₈ Ni	
SPECIFIC GRAVITY	:1.5	
Product Use	: Electro Plating & Electro Deposition , Research and Development	
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SECTION 2 : HAZARDS IDENTIFICATION

Classification of the substance or mixture

EUH031		R31
H314	Skin Corr. 1B	R34
H315	Skin Irrit. 2	R38
H332	Acute Tox. 4	R20
H350	Carc. 1B	R45, R49

Label elements



Signal Word

Danger



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Hazard Statements

EUH031	Contact with acids liberates toxic gas.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H350	May cause cancer .

Precautionary Phrases

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330+ P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361+ P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351+ P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501	Dispose of contents/container to local regulations

SECTION 3 : COMPOSITION / INFORMATION ON INGREDIENT

Composition:

Name	CAS #	% by Weight
Nickel fluoborate	14708-14-6	45
Water	7732-18-5	55

Toxicological Data on Ingredients

SECTION 4 : FIRST AID MEASURES

Description of first aid measures

Skin Contact	: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Eye Contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Most important symptoms and effects

Severe burns may occur.

Indication of any immediate medical attention

No additional measures required



SECTION 5 : FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable	Carbon dioxide. Dry chemical powder. sand
Unsuitable	Do not use water.

Special Hazards arising from the substance or mixture

Corrosive.

Advice for Fire Fighters

Wear self-contained breathing apparatus.
Wear protective clothing to prevent contact with skin and eyes.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill:

Corrosive liquid. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

SECTION 7 : HANDLING AND STORAGE

Personnal Precautions

Safe Handling

Ensure there is sufficient ventilation of the area.
Wash hands immediately after contamination.
Wash hand soughly after handling.

Protection against explosions and fires

Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Managing Storage Risks

Store in cool, well ventilated area.
Keep container tightly closed.
Avoid contact with water or humidity.

Storage Controls No special requirements

Maintaining Integrity Store away from oxidising agents
Keep in tightly closed container in cool area away from direct sunlight or heat sources

Other advice no further information available

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

General protective and hygiene measures	Wear protective gloves/protective clothing/eye protection/face protection. .
Engineering measures	Ensure there is sufficient ventilation of the area.
Eye / Face Protection	Safety Glasses with side-shields
Hand protection	Appropriate impermeable gloves.
Respiratory protection	Do not breathe dust/fume/gas/mist/vapours/spray. Use breathing protection with high concentrations
Skin protection	Handle with appropriate gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practice. Wash and dry hands. Protective clothing.
Other personal protection advice	no data

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Greenish solution
Odour	Odourless
Odour threshold	Not Applicable
PH	Not Applicable
Melting point / Freezing point	Not Applicable
Initial boiling point and boiling range	Not Applicable
Flash point	Not Applicable
Evaporation rate	Not Applicable
Flammability(solid,gas)	Not Applicable
Upper/lower flammability or explosive limits	Not Applicable
Vapour pressure	Not Applicable
Vapour density	Not Applicable
Relative density	1.454
Solubility(ies):	Water
Partition coefficient: n-octanol/water	Not Applicable
Auto-ignition temperature	Not Applicable
Decomposition temperature	Not Applicable
Viscosity	Not Applicable
Explosive properties	Not Applicable
Oxidising properties	Not Applicable



SECTION 10 : STABILITY AND REACTIVITY

Reactivity	no unusual reactivity
Stability	Stable under normal conditions.
Possibility of Hazardous Reactions	no hazardous reactions known
Conditions to Avoid	Moist Air.

Incompatible Materials

Oxidising agents.
Water.
Bases.
Strong acids.

Hazardous Decomposition Products

In combustion emits toxic fumes.
In combustion emits toxic fumes of hydrogen fluoride.
In combustion emits toxic fumes of boron trifluoride.

SECTION 11 : TOXICOLOGICAL INFORMATION

Information

Acute Toxicity	no data
Skin corrosion/irritation	strong corrosive effect on skin and mucous membranes
Serious eye Damage/irritation	strong corrosive effect.
Respiratory or skin Sensitization	No sensitizing effect known
Germ Cell mutagenicity	not known
Carcinogenicity	not known
Reproductive toxicity	not known
STOT-single exposure	not known
STOT-repeated exposure	not known
Aspiration hazard	not known

Additional

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH



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SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity : Not available.

BOD5 and COD : Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

SECTION 13 : DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste by an approved waste agency. Processing, use or contamination of this product may change the waste management options. The waste should be neutralised with **lime** in order to immobilise the fluoride as Calcium Fluoride.

Dispose of container and unused contents in accordance with federal, state and local requirements.

Advise toxic, corrosive nature. Must be chemically treated to an inert material prior to disposal in landfill.

SECTION 14 : TRANSPORT INFORMATION

UN Number : 1760

UN proper shipping name : Corrosive liquids n.o.s. (Nickel fluoborate)

Transport hazard class(es) : Class: 8

Packing group : II

Special Precautions for user: This substance, when containing less alcohol, water or phlegmatizer than specified, shall not be transported, unless specifically authorized by the competent authority.

SECTION 15 : REGULATORY INFORMATION

Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Nickel fluoborate
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Nickel fluoborate
TSCA 8(b) inventory: Nickel fluoborate;
Water CERCLA: Hazardous substances.: Nickel fluoborate;

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada) : CLASS E: Corrosive liquid.

DSCL (EEC) : R38- Irritating to skin. R41- Risk of serious damage to eyes.

HMIS (U.S.A.) :-

Health Hazard : 3

Fire Hazard : 0

Reactivity : 0

Personal Protection :-

National Fire Protection Association (U.S.A.):



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Health : 3
Flammability : 0
Reactivity : 0

Specific hazard:

Protective Equipment:

Gloves. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Face shield.

SECTION 16 : OTHER INFORMATION

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